

## Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the present application:

### Listing of Claims

- 1           1. (canceled) ~~A radio receiver comprising:~~  
2           ~~—— at least one amplifier to receive radio signals; and~~  
3           ~~—— a control circuit coupled to the at least one amplifier, wherein the control circuit~~  
4           ~~adjusts the operation of the at least one amplifier based on the received radio signals.~~
- 1           2. (currently amended) **A The radio receiver having of claim 1, wherein the at**  
2           ~~least one amplifier is~~ a LNA to receive a RF signal and produce an amplified signal that  
3           is coupled to a down-converting mixer that produces a mixer output, and the ~~control~~  
4           ~~circuit~~ radio receiver comprises:  
5                 a peak detector coupled to receive the mixer output to produce a peak signal;  
6                 an integrator coupled to the peak detector to receive the peak signal and produce  
7           an integrated signal;  
8                 a **second** mixer coupled to receive the integrated signal and a transmit power  
9           indicator to produce a current control signal that is coupled to the LNA to control a bias  
10          current of the LNA, wherein cross modulation associated with the received RF signal is  
11          reduced.
- 1           3. (currently amended) The radio receiver of claim 2, further comprising a  
2           **second third** mixer coupled to the output of the integrator and a receiver gain control  
3           signal to produce a VCO current control signal that is coupled to a VCO associated with a  
4           PLL that drives the down-converting mixer, wherein reciprocal mixing associated with  
5           the received RF signal is reduced by adjustment of the VCO associated with the PLL.
- 1           4. (currently amended) An adaptive system for use with a radio receiver to

2 adapt to interfering signals associated with a received RF signal, the radio receiver  
3 includes a LNA to receive the RF signal and produce an amplified signal that is coupled  
4 to a down-converting mixer that produces a mixer output, the adaptive system comprises:  
5 a peak detector coupled to receive the mixer output to produce a peak signal;  
6 an integrator coupled to the peak detector to receive the peak signal and produce  
7 an integrated signal; and  
8 a second mixer coupled to receive the integrated signal and a transmit power  
9 indicator to produce a current control signal that is coupled to the LNA to control a bias  
10 current of the LNA, wherein cross modulation associated with the received RF signal is  
11 reduced.

1 5. (original) The adaptive system of claim 4, further comprising a filter coupled  
2 to receive the mixer output and produce a filtered output that is coupled to the peak  
3 detector.

1 6. (currently amended) The adaptive system of claim 4, further comprising a  
2 LNA control circuit coupled to the second mixer to receive the current control signal and  
3 produce a LNA control signal that is coupled to the LNA to control a bias current of the  
4 LNA, wherein cross modulation associated with the received RF signal is reduced.

1 7. (currently amended) ~~The adaptive system of claim 4, further comprising~~ An  
2 adaptive system for use with a radio receiver to adapt to interfering signals  
3 associated with a received RF signal, the radio receiver includes a LNA to receive  
4 the RF signal and produce an amplified signal that is coupled to a down-converting  
5 mixer that produces a mixer output, the adaptive system comprises:  
6 a peak detector coupled to receive the mixer output to produce a peak signal;  
7 an integrator coupled to the peak detector to receive the peak signal and  
8 produce an integrated signal; and

9 a second mixer coupled to the ~~output of the integrator~~ integrated signal and a  
10 receiver gain control signal to produce a VCO current control signal that is coupled to a  
11 VCO associated with a PLL that drives the down-converting mixer, wherein reciprocal

12 mixing associated with the received RF signal is reduced by adjustment of the VCO  
13 associated with the PLL.

1 8. (original) The adaptive system of claim 7, wherein the VCO control current  
2 is coupled to the VCO associated with the PLL via a VCO control circuit.

1 9. (canceled) ~~The adaptive system of claim 4, further comprising a buffer~~  
2 ~~coupled between the mixer output and a non-linear element.~~

1 10. (currently amended) The adaptive system of claim ~~9~~ 7, wherein the peak  
2 detector ~~non-linear element~~ comprises a diode element.

1 11. (currently amended) ~~The adaptive system of claim 9, further~~  
2 ~~comprising:~~ An adaptive system for use with a radio receiver to adapt to interfering  
3 signals associated with a received RF signal, the radio receiver includes a LNA to  
4 receive the RF signal and produce an amplified signal that is coupled to a down-  
5 converting mixer that produces a mixer output, the adaptive system comprises:  
6 a nonlinear element coupled to receive the mixer output to produce a peak  
7 signal;  
8 an ~~second~~ integrator coupled to the non-linear element ~~and the buffer~~ to produce  
9 an ~~second~~ integrator output; and  
10 a ~~third~~ second mixer coupled to receive the ~~second~~ integrator output and a  
11 receiver power indicator to produce a receive control signal.

1 12. (original) The adaptive system of claim 11, wherein the receive control  
2 signal is coupled to a receive control circuit, and wherein an output of the receive control  
3 circuit is coupled to the down-converting mixer to adjust the down-converting mixer to  
4 reduce intermodulation distortion.

1 13. (original) A method for providing an adaptive system for use with a radio  
2 receiver to adapt to interfering signals associated with a received RF signal, the radio  
3 receiver includes an LNA to receive the RF signal and produce an amplified signal that is

4 coupled to a down-converting mixer that produces a mixer output, the method comprising  
5 steps of:  
6 deriving a peak signal from the mixer output;  
7 integrating the peak signal to produce an integrated signal;  
8 mixing the integrated signal and a transmit power indicator to produce a current  
9 control signal; and  
10 controlling a bias current of the LNA with the current control signal, wherein  
11 cross modulation associated with the received RF signal is reduced.

1 14. (currently amended) ~~The method of claim 13, wherein the step of mixing is~~  
2 ~~a step of:~~ A method for providing an adaptive system for use with a radio receiver to adapt  
3 to interfering signals associated with a received RF signal, the radio receiver includes an  
4 LNA to receive the RF signal and produce an amplified signal that is coupled to a down-  
5 converting mixer that produces a mixer output, the method comprising steps of:  
6 deriving a peak signal from the mixer output;  
7 integrating the peak signal to produce an integrated signal;  
8 mixing the integrated signal and a receive power indicator to produce a VCO  
9 control signal; and  
10 ~~the step of controlling is a step of:~~  
11 controlling a VCO based on the VCO control signal, wherein the VCO is  
12 associated with a PLL coupled to the down-converting mixer, and wherein reciprocal  
13 mixing associated with the received RF signal is reduced by adjustment of the VCO  
14 associated with the PLL.

1 15. (currently amended) ~~The method of claim 13, wherein the step of mixing is~~  
2 ~~a step of:~~ A method for providing an adaptive system for use with a radio receiver to adapt  
3 to interfering signals associated with a received RF signal, the radio receiver includes an  
4 LNA to receive the RF signal and produce an amplified signal that is coupled to a down-  
5 converting mixer that produces a mixer output, the method comprising steps of:  
6 deriving a peak signal from the mixer output;

- 7           integrating the peak signal to produce an integrated signal;  
8           mixing the integrated signal and a receive power indicator to produce a receive  
9   control signal; and  
10   ~~the step of controlling is a step of:~~  
11           controlling the down-converting mixer based on the receive control signal,  
12   wherein intermodulation distortion associated with the received RF signal is reduced.